



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,872	06/25/2003	John W. Marshall	112025-0516	3020
24267	7590	09/29/2008	EXAMINER	
CESARI AND MCKENNA, LLP			NGUYEN, DUSTIN	
88 BLACK FALCON AVENUE				
BOSTON, MA 02210				
			ART UNIT	PAPER NUMBER
			2154	
			MAIL DATE	DELIVERY MODE
			09/29/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/603,872	Applicant(s) MARSHALL ET AL.	
	Examiner DUSTIN NGUYEN	Art Unit 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-16, 18-26 and 28-32 is/are rejected.
- 7) ☒ Claim(s) 6, 17, 27 and 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-34 are presented for examination.

Response to Arguments

2. Applicant's arguments filed 06/23/2008 have been fully considered but they are not persuasive.

3. As per remarks, Applicants' argued that (1) Henderson fails to teach or suggest "performing ... the operations associated with the commands ... to modify the data ... while the data is transferred from the source to the destination".

4. As to point (1), Examiner respectfully disagrees since Henderson discloses a system and method for quickly modifying state information of packets [Abstract]. The system of Henderson includes a service processor coupled to Ethernet switch 106 for receiving and sending packets [Figure 1; and paragraph 0023], and the service processor 110 comprises a packet input unit 210 for receiving packets from Ethernet switch, an editing unit 216 and a packet output unit 222 for sending out packets. The editing unit receives edit instructions from the packet processing controller 200 and is responsible for packet editing which includes variety of packet modification functions such as inserting data in a packet, deleting data from a packet, etc ... [i.e. broadly interpreted as "performing ... the operations associated with the commands ... to modify

Art Unit: 2154

the data" as claimed] [Figure 2; and paragraphs 0030-0034]. In addition, Henderson discloses each packet that arrives at a services processor is assigned a packet context that contains information about the packet, state information related to the packet, and about the actions to be done to the packet, this context identifies the next action to be taken in processing the packet ... Information within the state tables is often modified in real time as packets are processed [i.e. broadly interpreted as "performing ... the operations associated with the commands ... to modified the data ... while the data is transferred from the source to the destination" as claimed] [paragraphs 0007 and 0008]. As such, the claims remain rejected as written, unpatentable over the cited prior art.

Allowable Subject Matter

5. Claims 6, 17, 27 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an

Art Unit: 2154

application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-4, 7, 9-15, 18, 20-25, 28-31 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Henderson et al. [US Patent Application No 2004/0042490].

8. As per claim 1, Henderson discloses the invention as claimed including a method for modifying data transferred from a source to a destination [i.e. the packets often must be processed or modified between their source and destination] [paragraphs 0005 and 0007], the method comprising the steps of:

reading one or more instructions, by a processor [i.e. the table entry processor receives table entries retrieved by the packet processing controller] [paragraph 0026], each instruction indicating an operation to modify the data [i.e. packet modification functions, such as insert or delete data from packet] [paragraph 0034];

generating, in response to the one or more instructions, one or more commands [i.e. a code that specifies which editing operation will be performed] wherein each command is associated with the operation to modify the data [i.e. insert operation, delete operation, etc...] [Figure 6; and paragraph 0049];

placing the commands in a data structure [i.e. store in edit registers] [Figure 6; and paragraphs 0049 and 0069];

Art Unit: 2154

holding the one or more commands and not performing the operations associated with the one or more commands until initiation of a transfer of data from the source to the destination [i.e. as packet is traversed] [paragraphs 0007, 0008, 0027 and 0039]; and

performing, by a device operating independently of the processor, the operations associated with the one or more commands contained in the data structure to modify the data as directed by the one or more commands while the data is being transferred from the source to the destination [i.e. the editing unit to apply the editing operations] [216, Figure 2; and paragraphs 0034, 0036 and 0069].

9. As per claim 2, Henderson discloses acquiring the data from the source [i.e. packet input unit] [210, Figure 2; and paragraph 0030].

10. As per claim 3, Henderson discloses generating a bit mask associated with the acquired data; and transferring the bit mask and the acquired data to the destination [i.e. mask multiplexer] [Figure 11; and paragraph 0081].

11. As per claim 4, Henderson discloses wherein the data structure comprises one or more entries wherein each entry is associated with a command and the entry contains information associated with a range of addresses and an operation code that are associated with the command [Figures 6 and 7; and paragraphs 0049, 0054 and 0055].

Art Unit: 2154

12. As per claim 7, Henderson discloses wherein each entry contains a length and a source address associated with the command [i.e. start of edit and size of edit] [Figure 6; and paragraph 0049].
13. As per claim 9, Henderson discloses wherein the data structure is a table [Figure 7; and paragraph 0007].
14. As per claim 10, Henderson discloses clearing the data structure [i.e. packet context can be cleared] [paragraphs 0039 and 0055].
15. As per claim 11, Henderson discloses wherein the source is a context memory [paragraph 0030].
16. As per claim 12, Henderson discloses wherein the destination is an output buffer [i.e. packet output unit] [222, Figure 2; and paragraph 0024].
17. As per claim 13, it is rejected for similar reasons as stated above in claims 1 and 11.
18. As per claim 14, it is rejected for similar reasons as stated above in claim 9.
19. As per claim 15, it is rejected for similar reasons as stated above in claim 4.

Art Unit: 2154

20. As per claim 18, it is rejected for similar reasons as stated above in claim 7.

21. As per claim 20, it is rejected for similar reasons as stated above in claim 3.

22. As per claim 21, Henderson discloses wherein the output buffer comprises: data steering logic configured to use the bit mask to identify valid data contained in the transferred data; a working register coupled to the data steering logic and configured to hold the valid data transferred from the data steering logic; and an output queue coupled to the working register and configured to hold the valid data transferred from the working register [Figures 10 and 11; and paragraphs 0041 and 0080-0086].

23. As per claims 22-25, they are rejected for similar reasons as stated above in claims 1-4.

24. As per claims 28-31, they are rejected for similar reasons as stated above in claims 1-4.

25. As per claim 34, it is rejected for similar reasons as stated above in claims 1, 2 and 4.

Furthermore, Henderson discloses determining from the entry that the operation is an insert data operation [i.e. insert operation op-code] [608, Figure 6; and paragraph 0049]; and performing the insert data operation, by a device operating independently from the processor, by determining a leading portion of the data, transferring the leading portion of the data to the destination, acquiring insert data, transferring the insert data to the destination, determining a lagging portion of the data, and transferring the lagging portion of the data to the destination [

Art Unit: 2154

i.e. using the information from the bit offset, number of bits, operation codes and data fields to perform the desired operation] [602-610, Figure 6; and paragraph 0049].

Claim Rejections - 35 USC § 103

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

27. Claims 5, 16, 26, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson et al. [US Patent Application No 2004/0042490], in view of Ueno [US Patent Application No 2002/0009050].

28. As per claim 5, Henderson does not specifically disclose the step of: searching the data structure for an entry containing information associated with a range of addresses that matches a range of addresses associated with the acquired data; if a matching entry is found, determining if an operation code contained in the matching entry indicates a delete data operation; and if so, generating a delete bit mask that represents data that is deleted in the acquired data and transferring the delete bit mask and the acquired data to the destination. Ueno discloses the step of: searching the data structure for an entry containing information associated with a range of addresses that matches a range of addresses associated with the acquired data; if a matching entry is found, determining if an operation code contained in the matching entry indicates a

Art Unit: 2154

delete data operation; and if so, generating a delete bit mask that represents data that is deleted in the acquired data and transferring the delete bit mask and the acquired data to the destination [i.e. the label stack deletion or pop operation] [Figures 4 and 5; and paragraphs 0028, 0032, 0033 and 0035]. It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Henderson and Ueno because the teaching of Ueno would enable information or data to be removed correctly to maintain data integrity.

29. As per claims 16, 26 and 32, they are rejected for similar reasons as stated above in claim 5.

30. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson et al. [US Patent Application No 2004/0042490], in view of Deforche et al. [US Patent Application No 2005/0232303].

31. As per claim 8, Henderson does not specifically disclose the step of: searching the data structure for an entry containing information associated with a range of addresses specified by the combination of the length and the source address contained in the entry that matches a range of addresses associated with the acquired data. Deforche discloses the step of: searching the data structure for an entry containing information associated with a range of addresses specified by the combination of the length and the source address contained in the entry that matches a range of addresses associated with the acquired data [paragraphs 0185 and 0186]. It would

Art Unit: 2154

have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Henderson and Deforche because the teaching of Deforche would provide a low overhead on processing time and/or low allocation of processing resource [Deforche, paragraphs 0005-0007].

32. As per claim 19, it is rejected for similar reasons as stated above in claim 8.

33. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dustin Nguyen whose telephone number is (571) 272-3971. The examiner can normally be reached on flex.

Art Unit: 2154

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached at (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Dustin Nguyen/
Primary Examiner, Art Unit 2154